



September 5, 2008

Chad A. Stobbe  
Land Quality Bureau  
Iowa Department of Natural Resources  
502 East 9th Street  
Des Moines, Iowa 50319-0034

Subject: Proposed changes to Chapter 108 Beneficial Use Determinations: Solid By-Products as Resources and Alternative Cover Material

Dear Mr. Stobbe:

The purpose of this letter is to communicate to the Iowa Department of Natural Resources our comments with respect to rule changes identified as the subject of this letter. We appreciate the opportunity to provide these comments.

Beneficial Reuse Management (formerly Residual Management, LLC) has completed over 100 projects and used more than 2 million tons of industrial byproducts (foundry sand and coal ash) in the last 10 years. The industrial byproducts were used for geotechnical fill for the construction of agricultural and commercial buildings, vehicle and agricultural feed storage lots, manure lagoons, roads, sight and sound barriers for both private and governmental clients, and the reclamation of non-metallic mines. Recently, we have partnered with a company to provide services for the agricultural land application of gypsum that is derived from flue gas desulfurization systems.

While our company primarily operates in Illinois, Indiana, and Wisconsin we have been exploring opportunities in many other states, including Iowa. We would like to provide these comments to you based upon our experience in this area and to hopefully help in designing regulations that not only protect the environment but also wisely increase the use of these materials to reduce land filling and provide sustainable resource management.

Our comments will be presented in chronological order as the rule reads by identifying the section in bold and comment in italics.

1. **567-108.2(2)** *Iowa Code section 455B.301 includes in its definition of solid waste those materials generated by industrial, commercial or institutional processes therefore we assume that industrial byproducts will not be allowed to be land applied as proposed here. The language used here in facts states that land application is considered disposal and not beneficial. This proposal seems to be in conflict with many states regulations and beneficial use determinations and recent information developed by the USEPA and the agricultural scientific community. We also note that the allowable beneficial uses of byproducts outlined further in this proposed code does not contain agricultural uses or refer to other Iowa codes where this may be reviewed under. We encourage the Iowa DNR to reconsider the exclusion of land application of byproducts and develop a code that allows their use under scientifically based agronomic practices.*



2. **567-108.4(4) and 567-108.4(6)** *The proposed code in total expands the beneficial uses of coal ash and foundry sand. However it does not include many of the generally accepted beneficial uses of these materials that states allow in their codes or allow for on a case-by-case basis. Some of those uses that have not been proposed include sub-base material for parking lots, buildings and areas adjacent to buildings, athletic venues such as soccer fields, sub-base for dedicated park or bicycle trails, surface course road material, sight and sound barriers, and utility trench backfill. Some of these beneficial uses could be interpreted as general fill under current Iowa regulations. We encourage Iowa to revisit this section of the code entirely and include those uses recommended here. In addition we encourage Iowa to review those engineering and environmental standards that apply to these beneficial uses in Chapter NR 538 Wisconsin Administrative Code as a guide in revising the code. Lastly we recommend that agricultural land application uses be included or at least referenced to another code under which they can be reviewed. These applications would include uses as a soil conditioner, amendment, and or as a synthetic soil.*
3. **108.4(17)** *The beneficial use of slag should not just be restricted to electric arc furnaces. Both induction furnace and cupola furnace slag from ferrous and aluminum foundries are an extremely benign material because of its vitreous physical properties. Leachate test water from these slags in fact contains fewer concentrations of chemical constituents than natural soil material that they replace for projects in many cases. We recommend that slags from ferrous and aluminum foundries be included in the proposed rule and that other slags from manufacturing steel be reviewed for their inclusion.*
4. **108.5(1)** *The proposed rule here allows beneficially uses of byproducts that are not universally approved in other parts of the rule if certain conditions and demonstrations are made. The proposed rule greatly expands those conditions and demonstrations that are in the current rule. While we agree with the concept of allowing a case-by-case review for these beneficial uses, some of the byproducts that have universally approved beneficial uses in other parts of the rule could not pass the environmental standards proposed here. For example, many coal ashes when subjected to water leach tests would exceed the limit of 10 times the drinking water MCL for arsenic. The proposed rule therefore should consider engineering standards in its review of these case-by-case reviews in its review process. For example a clay base or cap in many circumstances or an impervious surface can attenuate or mitigate any migration of water through a properly engineered fill.*
5. **108.6(455B, 455D)** *The proposed rule eliminates fill projects from its list of universally approved beneficial use projects and subject them to sanitary landfill rules. While we can only speculate why this change has been made, in its present form it would eliminate the legitimate use of byproducts for general fill applications that were recommended to be included in the rule in Item 2 of our comments above.*

*Many beneficial use projects that we have done are used in farm applications. For instance, many farmers are expanding their operations and need fill material to create level areas adjacent to their current operations to maximize efficiency or to build large embankments for manure lagoons. The base of these lagoons are always covered in concrete and their embankments with 2 feet of soil and vegetated. Under the proposed rule as we read it, most of this material would be defined as a fill since it is used to raise the level of the land.*

*Our recommendation is to focus the fill material issue where the problem exists. If Iowa seeks a better management standard for projects dealing with land reclamation specify the types of acceptable practices where these materials can be used for quarry or sand and gravel pit reclamation such as to reclaim highwalls for safety purposes or to use as a base material for land contouring to re-establish vegetation. These types of acceptable reclamation practices could be reviewed under **108.5(1)** on a case-by-case basis.*

*We agree that to simply fill a ravine is not a beneficial use project.*

Thank you for your considering our comments and recommendations. If you should have any questions on these comments please call Paul Koziar, our regulatory consultant at 608-219-0847. Paul has worked on regulatory matters for our company for the past 2-½ yrs and prior to that was the Beneficial Use Program Manager for the Wisconsin Department of Natural Resources for 8 years. He was responsible for implementing the statewide program under Chapter NR 538.

Sincerely yours,

BENEFICIAL REUSE MANAGEMENT, LLC



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Robert C. Spoerri  
Chief Executive Officer